

552,636

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
4 November 2004 (04.11.2004)

PCT

(10) International Publication Number
WO 2004/094000 A1

(51) International Patent Classification⁷: **A62C 37/00**,
31/02, 31/03

(FI) **METZGER, Harry** [FI/FI]; Aleksis Kiven tie 49,
FI-04200 Kerava (FI).

(21) International Application Number:
PCT/FI2004/000244

(74) Agent: **HEINÄNEN OY**; Annankatu 31-33 C, FI-00100
Helsinki (FI).

(22) International Filing Date: 21 April 2004 (21.04.2004)

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
20030620 24 April 2003 (24.04.2003) FI

(71) Applicant (*for all designated States except US*): **MARI-OFF CORPORATION OY** [FI/FI]; Vimatie 3, FI-01300 Vantaa (FI).

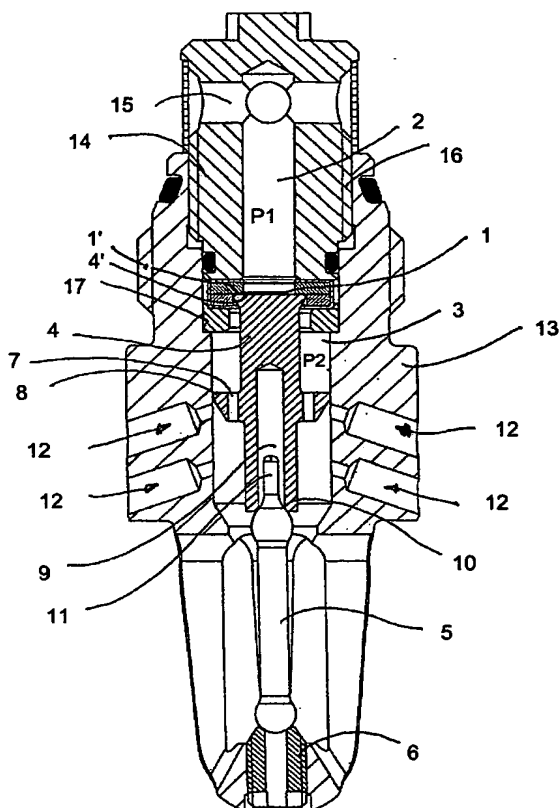
(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **SUNDHOLM, Göran** [FI/FI]; Ilmari Kiannon kuja 3, FI-04310 Tuusula

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,

[Continued on next page]

(54) Title: APPARATUS FOR BLOCKING A MEDIUM FLOW PASSAGE IN A SPRAY HEAD, AND SPRAY HEAD



(57) Abstract: An apparatus for blocking a medium flow passage in a spray head, said apparatus comprising a blocking element (1), such as a burst disk, arranged in the passage and, when unbroken, blocking the passage of medium flow from a first side of the blocking element to a second side of the blocking element, on the first side of which blocking element a first pressure (p1) prevails in the passage (2) while on the second side a second pressure (p2) prevails in the passage (3), said blocking element (1) being arranged to be ruptured so that a medium flow passage is formed through the blocking element when the pressure difference between the first and the second sides of the blocking element reaches a preset value. The apparatus comprises a supporting element (4) provided at least on that side of the blocking element where the pressure of the medium is lower at least just before the instant of rupture of the blocking element, which supporting element can be moved between at least two positions, a first position where the supporting element supports the blocking element (1) so that the blocking element cannot be ruptured even if the pressure difference in the passage between the first and the second sides of the blocking element is greater than the preset value, and a second position where the supporting element does not support the blocking element.

WO 2004/094000 A1



GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
ML, MR, NE, SN, TD, TG).

— *before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments*

Declaration under Rule 4.17:

— *of inventorship (Rule 4.17(iv)) for US only*

Published:

— *with international search report*

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*